

March 22, 2004
Case No. US010023 (7790/337)
Serial No.: 09/768,921
Filed: January 24, 2001
Page 6 of 16

CLAIM AMENDMENTS:

Claims 1-13 are currently pending in the application.

Please cancel pending claims 1-13 without prejudice or disclaimer as to the subject matter of claims 1-13.

Please add claims 14-27 as shown below.

The following listing of claims 1-27 will replace all prior versions, and listings, of claims in the application:

1.-13. (Cancelled)

14. (New) An apparatus for receiving signals from a control computer and for using the signals to control a lighting device, the apparatus comprising:

A10 a hardware device including a serial to parallel converter operable to convert the signals from serial form to parallel form; and

a lighting device microprocessor in electrical communication with the hardware device,

wherein the lighting device microprocessor is operable to receive the signals in parallel form from the hardware device, and

wherein the lighting device microprocessor is further operable to interpret the signals as commands for controlling the lighting device.

15. (New) The apparatus of claim 14, the hardware device further includes:

an edge detector circuit operable to perform a hardware edge detect of the signals.

16. (New) The apparatus of claim 14,

wherein said serial to parallel converter includes a preshift register; and

wherein said hardware device further includes a control logic operable to hold a first portion of a first signal in the preshift register until the first portion of the first signal passes a first error detection testing.

March 22, 2004
Case No. US010023 (7790/337)
Serial No.: 09/768,921
Filed: January 24, 2001
Page 7 of 16

- A10
17. (New) The apparatus of claim 16,
wherein said serial to parallel converter further includes a shift register; and
wherein said control logic is further operable to hold the first portion of the first signal in the shift register and a second portion of the first signal in the preshift register until the second portion of the first signal passes a second error detection testing.
18. (New) The apparatus of claim 14,
wherein said serial to parallel converter is further operable to partition a first signal into portions;
wherein said serial to parallel converter includes a preshift register and a shift register;
wherein, upon receiving the first signal, a first portion of the first signal is shifted into the preshift register to be checked for errors; and
wherein, upon a determination that the first portion of the first signal is error free, the first portion of the first signal is shifted from the preshift register into the shift register and a second portion of the second signal is shifted into the preshift register.
19. (New) A method for receiving and processing a lighting control signal from a central computer, the method comprising:
operating a hardware circuit to perform serial to parallel conversion and error detection of the lighting control signal;
subsequently conveying the lighting control signal in parallel form from the hardware circuit to a lighting device microprocessor; and
operating the lighting device microprocessor to decode the lighting control signal to thereby control a lighting device.
20. (New) The method of claim 19, further comprising

March 22, 2004
Case No. US010023 (7790/337)
Serial No.: 09/768,921
Filed: January 24, 2001
Page 8 of 16

X10
operating the hardware circuit to move the lighting control signal from a shift register to a storage register prior to conveying the lighting control signal in parallel form from the hardware circuit to the lighting device microprocessor.

21. (New) The method of claim 20, further comprising:

operating the hardware circuit to delay placing any further data into the shift register until after the lighting control signal has been moved from the shift register to the storage register to thereby prevent any loss of the lighting control signal.

22. (New) The method of claim 19, wherein the serial to parallel conversion and error detection of the lighting control signal includes:

operating the hardware circuit to shift a first portion of the lighting control signal into a preshift register to be checked for errors; and

upon a determination that the first portion of the lighting control signal is error free, operating the hardware circuit to shift the first portion of the lighting control signal from the preshift register into a shift register and to shift a second portion of the lighting control signal into the preshift register.

23. (New) A hardware device for interposing between a computer controlled lighting device and a control computer that controls the lighting hardware device, the hardware device comprising:

means for transmitting and receiving serial signals indicative of commands and data to control the lighting device;

means for ensuring that said data and commands include edges at predetermined times; and

means for converting the serial signals to parallel form and conveying the signals in parallel form to a microprocessor for decoding and for utilization in controlling the lighting device.

24. (New) A method of receiving a signal from a central computer to control a lighting device, the method comprising:

March 22, 2004

Case No. US010023 (7790/337)

Serial No.: 09/768,921

Filed: January 24, 2001

Page 9 of 16

A10

(a) placing a first portion of the signal into a preshift register, and checking the first portion of the signal for errors;

(b) shifting the first portion of the signal from the preshift register into a shift register if the first portion is error free; and

(c) repeating (a) and (b) for each remaining portion of the signal before shifting the signal out of the shift register to thereby control the lighting device.

25. (New) The method of claim 24,

wherein the signal is shifted out of the shift register in response to commands from a separate set of arbitration control logic.

26. (New) The method of claim 25,

wherein the arbitration control logic also controls a manual override for controlling the lighting device manually.

27. (New) The method of claim 24,

wherein a determination of an error of a first portion of the signal in the preshift register causes a retransmission of the first portion of the signal from the central computer.